**Syllabus**

**Getting Started Section**

Integer and fraction arithmetic 2-1,2-2,2-3,2-4

as well as simplifying basic expressions

**1)Laying the Groundwork Section**

Variables and expressions 1-1

Order of operations 1-2

Open sentences 1-3

Identity/Equality Properties 1-4

Distributive Property 1-5

Commutative/Associative Property 1-6

Square Roots and Real Numbers 2-7

**2)Representations Section**

Graphs and Functions 1-8

Analyzing data 1-9

Displaying data 2-5

Scatterplots/Stem-leaf 5-7

Histograms 13-3

Measures of variation 13-4

Box-Whisker 13-5

**3) Probability and Statistics Section**

Simple probability 2-6

Sampling and bias 13-1

Counting outcomes 14-1

Permutations/Combinations 14-2

Compound events 14-3

Probability Distributions 14-4

Probability simulations 14-5

**5) Equation Solving Section**

Writing equations 3-1

Solving equations with addition/subtraction 3-2

Solving equations with multiplication/division 3-3

Solving two step equations 3-4

Solving equations with a variable on each side 3-5

Solving equations and formulas 3-8

Weighted averages 3-9

**7) Inequalities Section**

Solving inequalities with addition/subtraction 6-1/6-2

Solving inequalities with multiplication/division 6-3/6-4

Solving equations with absolute values 6-5

**4) Ratios and Proportions Section**

Ratios and Proportions 3-6

Percent of change 3-7

Similar triangles 11-6

Trigonometric ratios 11-7

as well as other applications

**6) Graphing in the Coordinate Plane Section**

Coordinate Plane 4-1

Transformations 4-2

Graphing linear equations 4-5

Slope 5-1

Slope intercept form 5-3

Graphing systems of equations 7-1

Graphing inequalities 6-6

Graphing systems of inequalities 7-5

**8) Functions Section**

Relations 4-3

Equations for relations 4-4

Functions 4-6

Arithmetic Sequences 4-7

Writing equations from patterns 4-8

Slope and direct variation 5-2

Writing equations in slope intercept form 5-4

Point-slope form 5-5

Parallel and perpendicular lines 5-6

**9) Exponents Section**

Multiplying monomials 8-1

Dividing monomials 8-2

Scientific notation 8-3

Polynomials 8-4

Multiplying a polynomial by a monomial 8-6

Multiplying polynomials 8-7/8-8

Exponential functions 10-5

Growth and decay 10-6

Geometric sequences 10-7

**10) Radicals Section**

Simplifying radical expressions 11-1

Operations with radical expressions 11-2

Radical equations 11-3

Pythagorean Theorem 11-4

Distance Formula 11-5

Cube roots

**11) Solving Systems Section**

Solving systems by substitution 7-2

Solving systems by elimination 7-3

Solving system by linear combination 7-4

**12) Factoring Section**

Factors and gcf 9-1

Factoring using distributive property 9-2

Factoring trinomials 9-3/9-4

Factoring differences of squares 9-5

Factoring perfect squares 9-6

**13) Quadratics Section**

Graphing quadratic functions 10-1

Solving by graphing 10-2

Solving by completing the square 10-3

Quadratic formula 10-4

Exponential functions 10-5

Inverse variation 12-1

**14) Algebra with Rational Expressions Section**

Adding polynomials 8-5

Rational expressions 12-2

Multiplying expressions 12-3

Dividing rational expressions 12-4

Dividing polynomials 12-5

Adding rational expressions 12-6/12-7

Complex fractions 12-8

Solving rational expressions 12-9

Also to be covered prior to the OAA: Characteristics of polygons, measurement formulae, line and angle relationships, and nets